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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/458,319	12/10/1999	AIDAN JAMES SMYTH	DIVA-043	8719

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EXAMINER

RAMAN, USHA

ART UNIT	PAPER NUMBER
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2611

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DATE MAILED: 01/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/458,319

Applicant(s)

SMYTH ET AL.

Examiner

Usha Raman

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12-23-03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-21 is/are rejected.
- 7) ☒ Claim(s) 8 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 12/
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:
 - Reference number 100 listed in page 4, line 25 of the specification;
 - Reference number 102 listed in page 4, line 27 of the specification;
 - Reference number 125m listed in page 4, line 30 of the specification. It appears that this is a typo for 125n shown in figure 1.
 - Reference number 15 listed in page 5, line 15 of the specification. It appears that this is a typo for part 150 (transport processor) shown in figure 1.
 - Reference number 110-PL listed in page 5, line 20 of the specification. It appears that this is a typo for part 111 shown in figure 1.
 - Reference number 145-PL listed in page 5, line 23 of the specification. It appears that this is a typo for part 111-SC shown in figure 1.
 - Reference numbers 118, 120, and 116 listed in page 5, lines 26-27 of the specification.
 - Reference number 114-1 described in page 5, line 30 of the disclosure.
 - Reference number 122 described in page 11, line 4.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: SC¹ shown in figure 1 of the disclosure. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: in page 2, line 33, "andapparatus" are supposed to be two different words; and the alternative to "session controller 145" is also the session controller. Note page 6, line 11 of the disclosure.

Appropriate correction is required.

Claim Objections

4. Claim 15 is objected to because of the following informalities: the claim depends on "method" claim 8; claim 8 is an apparatus claim. Appropriate correction is required.
5. Claim 8 is objected to because of the following informalities: the claim recites the limitation "said subscriber " in lines 9 and 13. This should be "said subscriber equipment" for consistency. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 15 and 16-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites the limitation "said transport processor" in line 5. There is insufficient antecedent basis for this limitation in the claim.

In regards to claim 16, the method disclosed in step 5 (lines 19-23) is unclear because it claims that the present content is inserted in a transport stream to be provided to the subscriber, *after* the present content stream is already closed. It has been interpreted as "closing the present content stream" and "transport processor inserting next content into a transport stream being provided to said subscriber", which is consistent with the specification of minimizing latency at the user end for a seamless presentation of streaming video and is examined accordingly. Applicant is advised to review and revise the wording for step 5 in claim 16.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 8-10, 12-14, and 16-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Duso et al. (US Pat. 5,892,915).

In regards to apparatus claim 8 and method claim 16, Duso et al. disclose a system for distributing to a plurality of clients, one or more video clips from a play list in a seamless manner. The provider equipment is a video file server, which manages broadcast sessions with clients by maintaining an active client list containing client identifier, a stream server identifier, a play list of clips that are transmitted in sequence to a client, the clip currently being played and the play position in the play list. Note column 33, lines 3-14. A requesting client initiates a session with the video file server, which allocates the resources for the broadcast video session, creates the play list and returns the session handle to the requesting client. The client can manipulate and interact with the broadcast content stream during playback through the session handle. Note column 44, lines 13-25 and column 45 lines 10-15 and figures 34-35 of Duso et al. The play list in the video distribution system of Duso et al. is defined as a doubly linked list of video clips to be transmitted to the client. Note column 33, lines 14-16. Therefore system of Duso et al. has a session manager means that maintains a play-list and means for interacting with the subscriber equipment. Duso et al.

disclose that in addition to providing VCR like functions, the client can also dynamically edit or modify the play-list through "edit session" commands during playback of the content streams (shown in figures 30, 34-35 of Duso et al.). Upon initiating a session with a client, the controller server of Duso et al. assigns a stream server to service the client request. The controller server maintains a stripe set list for each video clip, and sends a copy of this to the stream server, which issues pre-fetch commands to the blocks of data associated with that video clip and streams it to the requesting client. Note column 33, lines 28-38 and column 8 lines 48-column 9, line 1. Therefore the stream server under acts as the server controller in that it controls the retrieval of video data from the disk array to service the client. The stream server also acts as the transport processor by providing a continuous stream to the client. The video file server of Duso et al. also has storage means, cached disk array storage system, (23), from which the data is retrieved and streamed to the requesting client. Note column 5, lines 19-22.

In regards to apparatus claim 9 and method claim 17, Duso et al. disclose that during an active session a client can either edit the play list such as insert or delete new clips or command VCR like controls during playback of a stream. Note column 37, lines 57-63 and column 38, lines 7-11.

In regards to apparatus claim 10 and method claim 18, Duso et al. disclose that in response to add or delete edit commands, causes video file

server to add new clips or deleted existing clips within the play-list. Note column 45, lines 10-15.

In regards to apparatus claim 12 and method claim 19, Duso et al. disclose that a "fast forward" command causes the playing of the stream in a forward direction at a fast rate and that a "fast reverse" or a rewind command causes the playing of the stream in a reverse direction at a fast rate. Note column 38, lines 12-21.

In regards to apparatus claims 13 and 14 and method claims 20 and 21, Duso et al. disclose a method of providing a continuous stream to the requesting client by maintaining a strip set list. The video control server maintains a strip set list is maintained for each video clip in the play list. When a stream server is assigned to service a client, the controller server transmits a copy of the stripe set list of the current clip and the stripe set list of the client's next clip to the stream server (which acts as the server controller). The stream server also tracks the current play position of a clip in order to issue a pre-fetch command to the disk array to pre-fetch and store in the cache, the next strip set of the current clip or the stripe set of the next clip when the current clip is near completion. Therefore Duso et al. has the method of sending a "termination notification" signal of the current clip in the form of issuing a pre-fetch command in order to pre-fetch the next stripe set from the disk and store in cache as the play position of the current stripe falls below a threshold level. Note column 32, lines 31-48 and column 33 lines 23-38. By issuing a pre fetch command of the next stripe

set to be pre fetched and stored in the cache, the session manager also communicates to the stream server (the server controller) the next content stream to be provided to the subscriber equipment.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duso et al. (US Pat. 5,892,915) in view of Katinsky et al. (US Pat. 6,452,609).

In regards to claim 11, while Duso et al. discloses a "rewind" command that causes playback of the first clip on the play-list and a "seek" command that allows for user to manipulate playback of the stream back some relative position in time, Duso et al. lacks a "skip backwards" and "skip forward" command to skip to the last clip or the next clip in the play list. Katinsky et al. disclose a media player for streaming media contents defined by a play list, where user can skip to the next or previous clip in the play-list. Note figure 7, reference numbers (106) and (104) and relevant descriptions column 6, lines 19-26 of Katinsky et al. It would have been obvious to one of ordinary skill at the time of the invention to modify the video distribution system of Duso et al. by adding the "skip backwards" and "skip forward" capabilities as taught by Katinsky et al. to provide

enhanced user control to the viewer by allowing to go back and view another video clip or skip the current video clip to go to the next clip in the play-list.

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duso et al. (US Pat. 5,892,915) in view of Day et al. (US Pat. 5,996,015).

In regards to claim 15, Duso et al. disclose that video files are typically striped across several disks and that the video file server maintains identifiers or sets of pointers identifying the physical location of the stripe sets. The video data is pre-fetched from the locations of stripes specified by the stripe set list and streamed continuously in order to provide a continuous playback of the video file to the requesting client. Note column 33, lines 28-38 of Duso et al. While Duso et al. do not specifically disclose that the disk array is distributed over a plurality of storage servers, Day et al. show multimedia files striped across disks of a plurality of data pump storage servers. It would have been obvious to one of ordinary skill to modify the video distribution system of Duso et al. by including several storage servers to store the video clips, and still maintain a stripe set list for each video clip in order to retrieve stripes of a video clip located on different disks or servers. The motivation for using a plurality of storage servers is to provide a scalable, reliable distributed server for storage of multimedia assets.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usha Raman whose telephone number is (703)

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305-0376. The examiner can normally be reached on Mon-Thu: 9am -7pm, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on (703) 305-4380. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

UR
12-24-03


ANDREW FAILE
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